

SYSTEM AND METHOD FOR MOVING OBJECTS WITHIN THREE-DIMENSIONAL SPACE

Abstract

Embodiments of the invention move objects throughout three-dimensional by using two supporting ropes each of which connects to both opposing sides of the payload. If one rope breaks, the payload gently travels to the middle of the coverage area in a safe manner, maintaining the given displacement in the other unbroken axis. One rope controls the X-axis motion of the platform and is designated the X movement rope. The other rope controls the Y-axis motion of the platform and is designated the Y movement rope. Displacing equal lengths of the X and Y movement ropes allows the Z-axis of the platform to be traversed. There is no need for a complex computer control system since the Z-axis displacement is substantially independent of X and Y axis movement over a coverage area serviced by the platform. In addition, since the ropes are commanded from one point, distantly located motors and electrical cables are not required. Many types of useful devices may then be attached to the platform including devices

that require external power or devices that possess their own power and are operated via wireless signals. Triangle and quadrilateral embodiments may be readily constructed without requiring equal distances between any two support structures.